

Notice of Allowability

Application No.

09/746,486

Examiner

Toan D. Nguyen

Applicant(s)

SACHS ET AL.

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/27/06.
2. ☒ The allowed claim(s) is/are 1-9, 11-19, and 21-27 are renumbered 1-25, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 3/28/06
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Aslam A. Jaffery on March 28, 2006.

2. The application has been amended as follows:

IN THE CLAIMS:

In claim 1 lines 2-4, the limitation "to a group of data packets to create a coded group of packets by supplementing a set of parity packets to the group of data packets;" has been replaced by --- to data packets to create coded data packets by supplementing parity packets to the data packets; ---

In claim 1 lines 5-6, the limitation "transmitting the data packets, and transmitting a set of corresponding parity packets after the data packets have been sent;" has been replaced by --- transmitting the coded data packets, and transmitting the parity packets after the data packets have been transmitted; ---

In claim 1 line 7, the limitation "sending" has been replaced by --- receiving ---.

In claim 1 line 8, the limitation "a total number of data packets" has been replaced by --- a total number of the data packets ---

In claim 1 line 10, the limitation "received packets equals the total number of data packets" has been replaced by --- received data packets equals the total number of the data packets ---

In claim 1 line 13, the limitation "and" has been deleted.

In claim 1 line 15, the limitation "packets." has been replaced by --- packets; and manipulating the parity packets in response to information included in the acknowledgement. ---

In claim 2 lines 1-2, the limitation "the data packets include multi-media data packets, and the transmitting includes transmitting over a wireless network." has been replaced by --- the transmitting of the data packets comprises transmitting multi-media data packets over a wireless network. ---

In claim 3 lines 1-2, the limitation "transmitting the multi-media data packets includes multi-media streaming over an Internet Protocol (IP) network." has been replaced by --- the transmitting of the multi-media data packets comprises multi-media streaming over an Internet Protocol (IP) network. ---

In claim 4 lines 1-2, the limitation "the multi-media streaming includes streaming via IEEE 802.11 standard over a wireless network." has been replaced by --- the multi-media streaming comprises multi-media streaming via the IEEE 802.11 standard over the wireless network. ---

In claim 5 line 1, the limitation "includes" has been replaced by --- comprises ---

In claim 6 lines 1-4, the limitation "The method of claim 1, wherein the sending of the acknowledgment in response to the number of correctly received data packets

equaling the total number of data packets is performed via a Reed-Solomon (RS) code.” has been replaced by --- The method of claim 1, further comprising generating the parity packets via a Reed-Solomon (RS) code. ---

In claim 7 lines 1-4, the limitation “The method of claim 1, wherein the sending of the acknowledgment in response to the number of correctly received packets equaling the total number of data packets multiplied by the predetermined constant is performed via a Tornado code.” has been replaced by --- The method of claim 1, generating the parity packets via a Tornado code. ---

In claim 8 lines 1-3, the limitation “wherein transmitting the group of packets includes interleaving and transmitting a second and separate group of data packets.” has been replaced by --- wherein the transmitting the data packets comprises interleaving and transmitting a separate group of data packets. ---

In claim 9 lines 1-2, the limitation “The method of claim 1, wherein the receiver sends multiple acknowledgement signals for a group of packets.” has been replaced by --- The method of claim 1, further comprising receiving multiple acknowledgements for the data packets. ---

In claim 11 lines 4-6, the limitation “apply a forward error correction code to a group of data packets to create a coded group of packets by supplementing a set of parity packets to the group of data packets;” has been replaced --- apply a forward error correction code to data packets to create coded data packets by supplementing parity packets to the data packets; ---

In claim 11 lines 7-8, the limitation "transmit the data packets, and transmitting a set of corresponding parity packets after the data packets have been sent;" has been replaced by --- transmit the coded data packets, and transmitting the parity packets after the data packets have been transmitted; ---

In claim 11 lines 9-11, the limitation "sending an acknowledgment in response to one or more of a number of correctly received data packets equals to a total number of data packet, and" has been replaced by --- receive an acknowledgment in response to one or more of a number of correctly received data packets equals to a total number of the data packets, and ---

In claim 11 line 12, the limitation "received packets equals the total number of data packets" has been replaced by --- received data packets equals the total number of the data packets ---

In claim 11 line 15, the limitation "and" has been deleted.

In claim 11 line 17, the limitation "packets." has been replaced by --- packets; and manipulate the parity packets in response to information included in the acknowledgement. ---

In claim 12 lines 1-3, the limitation "wherein the data packets include multi-media data packets, and the transmitting includes transmitting over a wireless network." has been replaced by --- wherein the set of instructions when executed, further cause the machine to transmit multi-media data packets over a wireless network. ---

In claim 13 lines 2-3, the limitation "transmitting the multi-media data packets includes multi-media streaming over an Internet Protocol (IP) network." has been

replaced by --- the transmitting of the multi-media data packets comprises multi-media streaming over an Internet Protocol (IP) network. ---

In claim 14 lines 2-3, the limitation "multi-media streaming includes streaming via IEEE 802.11 standard over a wireless network." has been replaced by --- multi-media streaming comprises multi-media streaming via the IEEE 802.11 standard over the wireless network. ---

In claim 15 line 2, the limitation "includes" has been replaced by --- comprises ---

In claim 16 lines 1-4, the limitation "wherein the sending of the acknowledgment in response to the number of correctly received data packets equaling the total number of data packets is performed via a Reed-Solomon (RS) code." has been replaced by --- wherein the set of instructions when executed by the machine, further cause the machine to generate the parity packets via a Reed-Solomon (RS) code. ---

In claim 17 lines 1-4, the limitation "wherein the sending of the acknowledgment in response to the number of correctly received packets equaling the total number of data packets multiplied by the predetermined constant is performed via a Tornado code." has been replaced by --- wherein the set of instructions when executed by the machine, further cause the machine to generate the parity packets via a Tornado code. ---

In claim 18 lines 2-3, the limitation "transmitting the group of packets includes interleaving and transmitting a second and separate group of data packets." has been replaced by --- the transmitting the data packets includes interleaving and transmitting a separate group of data packets. ---

In claim 19 lines 1-2, the limitation "wherein the receiver sends multiple acknowledgement signals for a group of packets." has been replaced by --- wherein the sets of instructions when executed by the machine, further cause the machine to receive multiple acknowledgements for data packets. ---

In claim 21 lines 2-4, the limitation "an encoder to apply a forward error correction code to a group of data packets to create a coded group of packets by supplementing a set of parity packets to the group of data packets;" has been replaced by --- an encoder to apply a forward error correction code to data packets to create coded data packets by supplementing parity packets to the data packets; ---

In claim 21 line 5, the limitation "a transmitter to" has been replaced by --- a transmitter coupled to the encoder, the transmitter to ---

In claim 21 line 6, the limitation "transmit the data packets to a receiver over a network," has been replaced by --- transmit the coded data packets to a receiver over a network, ---

In claim 21 line 7, the limitation "transmit a set of corresponding parity packets, and" has been replaced by --- transmit the parity packets, and ---

In claim 21 line 8, the limitation "sending an acknowledgment in response to one or more of" has been replaced by --- receive an acknowledgment from a receiver in response to one or more of ---

In claim 21 line 9, the limitation "a total number of data packet, and" has been replaced by --- a total number of the data packet, and ---

In claim 21 line 11, the limitation "received packets equals the total number of data" has been replaced by --- received data packets equals the total number of the data ---

In claim 21 lines 13-16, the limitation "a receiver to receive the positive acknowledgement signal, wherein in response to receiving the acknowledgement, the transmitter ceases to send additional parity packets; and in response to not receiving the acknowledgment; continuing to transmit the parity packets." has been replaced by --
- the receiver coupled to the encoder and transmitter, the receiver to send the acknowledgement, wherein in response to receiving the acknowledgement at the transmitter, the transmitter to cease to send additional parity packets; and in response to not receiving the acknowledgment, the transmitter to continue to transmit the parity packets, the transmitter is further to manipulate the parity packets in response to information included in the acknowledgement. ---

In claim 22 lines 1-2, the limitation "the transmitter streams multi-media data packets over an Internet Protocol (IP) network." has been replaced by --- the transmitter is further to stream the data packets over an Internet Protocol (IP) network, wherein the data packets include multi-media data packets. ---

In claim 23 lines 1-2, the limitation "the transmitter streams multi-media data packets via an IEEE 802.11 standard over a wireless network." has been replaced by --- the transmitter is further to stream the multi-media data packets via the IEEE 802.11 standard over a wireless network. ---

In claim 24 lines 1-2, the limitation "the transmitter suppresses physical layer acknowledgements via multicasting IP addresses." has been replaced by --- the transmitter is further to suppress physical layer acknowledgements via multicasting IP addresses. ---

In claim 25 lines 1-4, the limitation "wherein the sending of the acknowledgment in response to the number of correctly received data packets equaling the total number of data packets is performed via a Reed-Solomon (RS) code." has been replaced by --- further comprises a generator coupled with the transmitter, the generator to generate the parity packets via a Reed-Solomon code (RS). ---

In claim 26 lines 1-4, the limitation "The system of claim 21, wherein the sending of the acknowledgment in response to the number of correctly received packets equaling the total number of data packets multiplied by the predetermined constant is performed via a Tornado code" has been replaced by --- The system of claim 25, wherein the generator is further to generate the parity packets via a Tornado code. ---

In claim 27 lines 1-2, the limitation "wherein the transmitter interleaves a second and separate group of data packets with the group of data packets." has been replaced by --- wherein the transmitter is further to interleave a separate group of data packets. --

Claims 10 and 20 have been cancelled.

The above examiner's amendment was made to clarify the claims.

3. The following is an examiner's statement of reasons for allowance:

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Regarding claims 1, 11 and 21, the prior art fails to teach a combination of the steps of:

manipulating the parity packets in response to information included in the acknowledgement, in the specific combination as recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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STEVEN NGUYEN
PRIMARY EXAMINER